



The Sampler

October 24, 2013

The Sampler is a monthly e-newsletter produced by the Volunteer Lake Assessment Program.

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Web Highlights

This month's featured lake website is the [Contoocook Lake Area Preservation Association](#), Jaffrey, NH

[Residents Divided Over Shoreline Protection Plan](#)

[Water Plant Shut Over Lethal Microcystin from Algae](#)

[Mysterious Underwater Circles Created by 5-inch Fish Seeking Love](#)

[Toxic Algae Cause of 100 Elk Deaths in Northeastern NM](#)

Upcoming Events

[EPA Watershed Academy Webcasts](#)

[PSU Center for the Environment 2013 Fall Science Colloquium](#)

Wednesdays 4:00 - 5:00 p.m.
Boyd Science Center,
Rm. 001

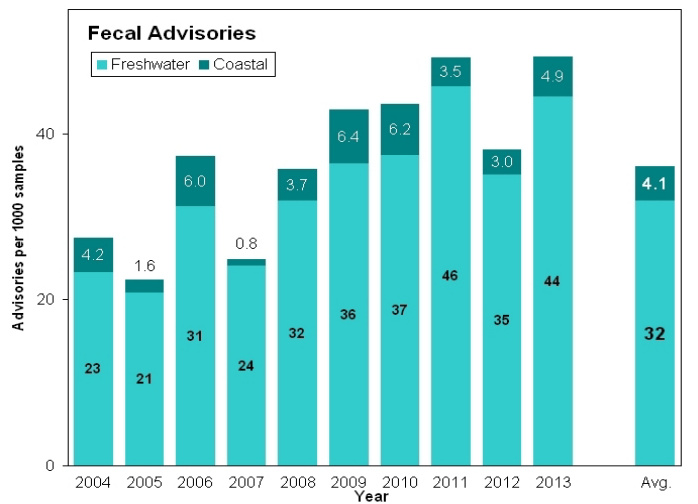
[NH Drinking Water Expo and Trade Show](#)

Wednesday Oct. 30, 2013
8:00 a.m. - 4:00 p.m.
Grappone Conference Center
Concord, NH

The 2013 Freshwater and Coastal Beach Season

The DES [Beach Inspection Program](#) routinely collects water samples at public beaches during the swimming season and tests these samples for fecal bacteria to ensure protection of the public's health. These fecal bacteria are indicator organisms which show the potential presence of hard-to-detect, disease-causing organisms, also called pathogens. *E. coli* are the indicator organism for freshwater beaches and *Enterococci* are the indicator organisms for marine beaches. In addition, samples of blue-green scums at freshwater beaches and lakes are examined for potentially toxin-producing cyanobacteria. When test results are above state standards, DES issues an advisory until test results come back clean. Although not required, beach owners may choose to close the beach until an advisory is lifted.

In 2013, DES issued 80 fecal advisories and 8 cyanobacteria advisories; more total advisories than ever issued in a single summer. We suspect the increase in advisories was caused by the increased rainfall in June and July that washed fecal contamination from the surrounding land into rivers and lakes. The rate of advisories for the number of samples conducted has been increasing during the last five years. Fewer than 32 advisories were issued for every 1000 freshwater samples collected between 2004 and 2009. However, more than 34 advisories were issued for every 1000 freshwater samples collected since 2009. The last five years have, on average, been rainier than the previous five years, so the increase in advisory rates is expected.



The rate for coastal advisories does not have an increasing trend; since 2004 no more than 6.4 coastal advisories have ever been issued per 1000 saltwater samples collected. The tide and currents mix the coastal waters well to help keep annual advisory rates low. In the past ten years, 8 cyanobacteria advisories have been issued on average each year. Clear trends do not appear to

Grants

NHDES Drinking Water Supply Grants

Protect Lands in the Southern I-93 Corridor and Lake Massabesic Watershed Eligibility Application deadline December 13, 2013

Limno Lingo

Littoral

Zone: The transitional zone between land and open water of lakes and streams. The size of the littoral zone depends upon the geomorphology and rate of sedimentation since the lake was formed. The littoral zone supports a variety of aquatic macrophytes in turn providing critical wildlife habitat. It can also act as a filter between the surface flow from land to open water.

be emerging from cyanobacteria events, other than increased awareness after the initial advisories most likely encouraged more people to recognize cyanobacteria blooms as an issue. To stay current on beach advisory information during the summer months visit their interactive [website](#). [Freshwater and coastal beach reports](#) are also available detailing current and historical advisory information.

August and September VLAP Summary

As VLAP headed into August which is typically the last sampling month of the summer for most lakes, we expected a busy schedule consistent with previous months. However, biologist visits were down slightly with 31 conducted versus 43 in July. This was due to the loss of a summer intern early in August as she headed back to college, leaving one staff to conduct biologist visits and the other to cover the pick ups, drop offs and sample analyses in the JCLC. That did not stop lakes from sampling on their own as 75 lakes sampled in August. September was busier than usual with four biologist visits and 17 lakes sampling on their own. The weather cooperated well into September for most lakes to get one last sampling event in before fall turnover.

Although August was cooler than normal with Concord averaging just 66.9 degrees, it was also much drier than normal with Concord receiving only 2.05 inches of rain, more than an inch below normal as reported by the National Weather Service. Due to the dry weather, many volunteers reported tributaries had dried up or had very low flow and were not sampled, which is normal for August. Volunteers reported robust aquatic plant and filamentous green algal growth however reports of cyanobacteria were less than in previous years. Lake clarity may have improved in August due to drier weather and generally low levels of algal growth. September saw slightly cooler and wetter weather with Concord averaging 59.6 degrees with 4.81 inches of rainfall. This was over an inch above average with most falling during the first half of the month, and September 1st received 1.68 inches of rain setting a record for the most rainfall in a single day for the month.

As VLAP wraps up the 2013 season, we want to recognize the hard work and commitment of our volunteer lake monitors. Thank you for another successful year of monitoring and we hope to see you all again in 2014!

Green Grass and Clear Water

The UNH Cooperative Extension has released a new brochure ["Green Grass and Clear Water"](#) Environmentally friendly lawn care recommendations for northern New England. This is a great resource easy to distribute to your neighbors, lake associations and watershed residents. Visit UNH Cooperative Extension to learn more [Sustainable Landscapes and Turf](#).

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